

Claims

What is claimed is:

1. **A heat sink with guiding fins, comprising:**
a base having a plate part,
wherein each side of a pair of two opposite sides of said plate part comprises a declining part;
and
two groups of fins,
wherein each said group is formed by a plurality of said fins extended up against each said declining part,
wherein a concave part is formed by said plate part and said two groups of fins,
wherein the top width of said concave part is wider than the bottom width of said concave part, and
wherein a gap is between each two of said neighboring fins.
2. **The heat sink with guiding fins according to claim 1, wherein the material of said heat sink is selected from the group consisting of copper and aluminum.**
3. **The heat sink with guiding fins according to claim 1, wherein said two groups of fins and said base are integrally formed.**

4. The heat sink with guiding fins according to claim 1, wherein said concave part is tied in with a clip to fasten said heat sink on a processor.
5. The heat sink with guiding fins according to claim 1, wherein said concave part comprises a slot tied in with a clip to fasten said heat sink on a processor.
6. A heat sink with guiding fins, comprising:
 - a base with a plate part,
wherein each side of a pair of two opposite sides of said plate part comprises a declining part;
 - and
 - two groups of fins,
wherein each said group is formed by a plurality of said fins extended up against each said declining part,
wherein a concave part is obtained by said plate part and said two groups of fins,
wherein the top width of said concave part is equal to the bottom width of said concave part, and
wherein a gap is between each two of said neighboring fins.
7. The heat sink with guiding fins according to claim 6, wherein

the material of said heat sink is selected from the group consisting of copper and aluminum.

8. The heat sink with guiding fins according to claim 6, wherein said two groups of fins and said base are integrally formed.

9. The heat sink with guiding fins according to claim 6, wherein said concave part is tied in with a clip to fasten said heat sink on a processor.

10. The heat sink with guiding fins according to claim 1, wherein said concave part comprises a slot tied in with a clip to fasten said heat sink on a processor.

11. The method for a heat sink with guiding fins, comprising the steps of:

- (a) obtaining a metal block with two parallel ramps and a concave part connecting said two ramps at the middle of an end surface of said metal block and so forming two convex parts on said metal block;
- (b) cutting at one of said ramps on a side of said concave part, wherein a cutting tool is tilted to cut a fin from said side of said concave part;
- (c) adjusting said fin to be perpendicular after cutting;

(d) repeating said step (b) and said step (c) to obtain a plurality of fins on said side of said concave part; and

(e) repeating said step (b), (c) and (d) at the other ramp on the other side of said concave part to obtain a heat sink comprising a base with a plate part, wherein each side of two opposite sides of said plate part comprises a declining part; and two groups of fins, wherein each group is formed by a plurality of said fins extended up perpendicularly against each said declining part and a gap is between each two of said neighboring fins.

12. The heat sink with guiding fins according to claim 11, wherein the material of said heat sink is selected from the group consisting of copper and aluminum.

13. The heat sink with guiding fins according to claim 11, wherein the top width of said concave part is wider than the bottom width of said concave part.

14. The heat sink with guiding fins according to claim 11, wherein the two side surfaces of said concave part are parallel.